

L2 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2001 ACS
AN 1989:110513 CAPLUS
DN 110:110513
TI Enzyme immunoassay of **medullasin** in peripheral blood
AU Aoki, Yosuke; Yoshida, Mitsuo; Kominami, Eiki
CS Dep. Biochem. Nutr., Inst. Public Health, Tokyo, Japan
SO Clin. Chim. Acta (1988), 178(2), 193-204
CODEN: CCATAR; ISSN: 0009-8981
DT Journal
LA English
AB An enzyme immunoassay method for the detn. of the amt. of
medullasin, a **serine protease** in granulocytes,
was developed. Beads coated with IgG obtained from immunized rabbits
were incubated with **medullasin**, Fab'-peroxidase conjugate was added,
and peroxidase activity bound to beads was measured by a
fluorophotometer.
The amt. of **medullasin** detd. by this method correlated well with
the value calcd. from the protease activity measured by the conventional
method. The min. detectable amt. of **medullasin** was 300 pg.
Granulocytes obtained from patients with multiple sclerosis in active
phase and those from patients with Behcet's disease in relapse showed
elevated levels of **medullasin** as compared with normal controls.
However, the amt. of **medullasin** in granulocytes obtained from
patients in remission revealed normal values. These results indicate
that elevated levels of **medullasin** activity in granulocytes of these
diseases in relapse is due to an increased amt. of **medullasin** in
granulocytes and that the normalization of **medullasin** activity
in remission is the result of the decrease of the amt. of

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L2 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2001 ACS

AN 1987:136833 CAPLUS

DN 106:136833

TI **Medullasin** stimulates the maturation of natural killer cells from human large granular lymphocytes

AU Aoki, Yosuke

CS Dep. Biochem. Nutr., Inst. Public Health, Tokyo, 108, Japan

SO Jpn. J. Cancer Res. (GANN) (1987), 78(1), 74-9

CODEN: JJCREP; ISSN: 0910-5050

DT Journal

LA English

AB **Medullasin**, a **serine protease** in bone marrow cells, has been shown to enhance human natural killer cell activity by acting directly on large granular lymphocytes. In the present report the mechanism of activation of natural killer cells by **medullasin** was studied by employing a single cell assay method in agar. **Medullasin** enhanced the target-binding capacity of lymphocytes, but the percentage of target-binding cells with dead target remained essentially unchanged. The max. recycling capacity of natural killer cells was also increased by the treatment with **medullasin**. Thus, **medullasin** in granulocytes stimulates the maturation of natural killer cells with elevated recycling capacity from human large

L2 ANSWER 5 OF 5 BIOSIS COPYRIGHT 2001 BIOSIS DUPLICATE 1
AN 1983:176408 BIOSIS
DN BA75:26408
TI **MEDULLASIN** ENHANCES HUMAN NATURAL KILLER CELL ACTIVITY.
AU AOKI Y; SUMIYA M; OSHIMI K
CS DEP. BIOCHEM., JICHI MED. SCH., TOCHIGI, JAPAN.
SO J CLIN INVEST, (1982) 69 (6), 1223-1230.
CODEN: JCINAO. ISSN: 0021-9738.
FS BA; OLD
LA English
AB **Medullasin**, a new **serine protease** found in bone marrow cells, increased markedly human natural killer cell activity. Whereas the natural killer cell activity measured immediately after the treatment with **medullasin** remained almost on the same level as the control, an incubation at 37.degree. C for several hours increased markedly the natural killer cell activity of the lymphocytes treated with **medullasin**. Enhancement of the natural cytotoxicity was caused by the treatment with physiologic concentrations of the protease (5-20 .mu.g/ml). Inhibitors of **medullasin** such as phenylmethanesulfonyl fluoride and elastatinal prevented the activation of natural cytotoxicity.
Depletion of lymphocytes bearing Fc receptors for IgG abolished the enhancement of natural killer cell activity by **medullasin**. Interferon activity was not detected in the supernatant of lymphocyte cultures stimulated with **medullasin**. The **medullasin** enhanced further the natural killer cell activity of lymphocytes stimulated with interferon. **Medullasin** activity was detected neither in unstimulated nor stimulated (by concanavalin A or phytohemagglutinin) human lymphocytes. The protease was released easily from human mature granulocytes into culture medium. The level of human natural killer cell activity is apparently regulated by **medullasin** released by mature granulocytes.

L2 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2001 ACS
AN 1992:649543 CAPLUS
DN 117:249543
TI Interaction of **medullasin** and plasma inhibitors
AU Aoki, Yosuke; Hase, Tomomi; Arakawa, Hideo; Ikai, Atsushi
CS Dep. Biochem. Nutr., Inst. Public Health, Japan
SO Ensho (1992), 12(4), 361-7
CODEN: ENSHEE; ISSN: 0389-4290
DT Journal
LA Japanese
AB **Medullasin** is a **serine protease** found in human bone marrow cells. It resembles elastase, but has no elastinolytic activity. It consists of 238 amino acid residues with He as the amino terminal and His as the carboxy terminal. **Medullasin** causes inflammation characterized by the infiltration of a large no. of macrophages when injected into animal skin. Protease inhibitors in plasma such as .alpha.2-macroglobulin and .alpha.1-antitrypsin into guinea pig skin caused no inflammation. When these inhibitors were injected 5 s after the injection of **medullasin**, phlogistic activity of the protease was not prevented by them. These results indicate that **medullasin** released into the tissues directly from granulocytes attaches to them immediately in such a manner but plasma inhibitors are not able to inhibit it. Therefore, **medullasin** released from granulocytes directly to the tissues is considered to be able to act on them in spite of the presence of a large amt. of plasma protease

L2 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2001 ACS
AN 1989:229664 CAPLUS
DN 110:229664
TI Biological properties and the structure of **medullasin**. An
inflammatory **serine protease**
AU Aoki, Yosuke; Okano, Kiyoshi; Naruto, Masanobu; Shimizu, Hirohiko
CS Dep. Biochem. Nutr., Inst. Public Health, Japan
SO Ensho (1988), 8(4), 315-20
CODEN: ENSHEE; ISSN: 0389-4290
DT Journal; General Review
LA Japanese
AB A review with 19 refs. of the modulating effects of **granulocyte medullasin** on lymphocytes and monocytes and the role in inflammation and the structure of **medullasin**.